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GB 1499835
GB 1469540
GB 1461156
GB 1433755
GB 1345222
GB 0332496
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(54) Method of moulding

(57) A method of moulding in a plastics material an article having at least one narrow section elongate bore therein involves locating appropriate core members, such as wires, at the position of the elongate bore, when the mould is closed, introducing the plastics material under pressure into the mould cavity, withdrawing the wires and subsequently opening the mould and ejecting the article.

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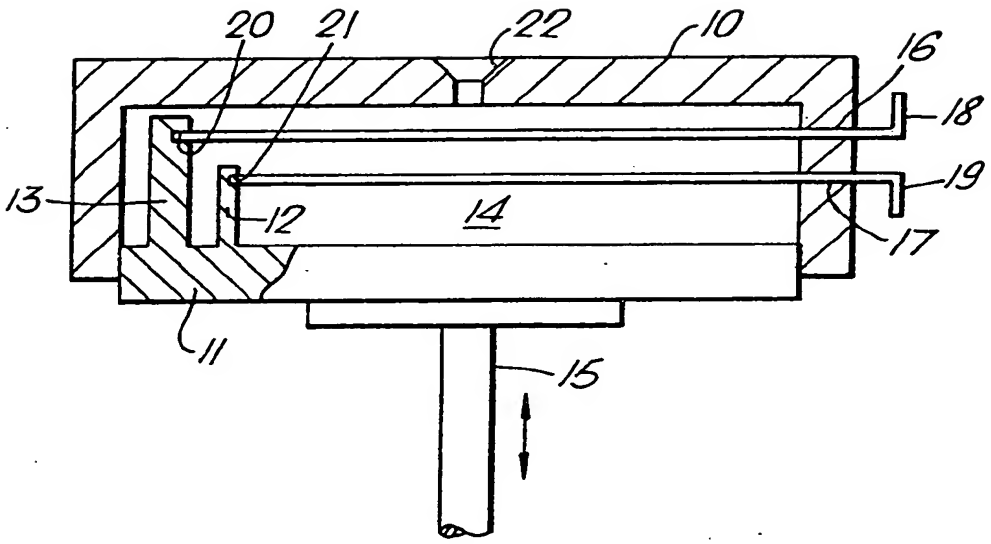

SPECIFICATION

Method of moulding

The present invention relates to a method of moulding.

From time to time, it is necessary to mould long narrow bores or passages in a plastics material which may, for example, be used as fluid ducts within the moulding of the plastics material. One such plastic product which is contemplated in the copending Application of ours, of even date, is in the moulding of a support member for an aerated drinks machine. It has hitherto been difficult to mould such elongate bores having a narrow cross-section.

There is now proposed, according to the present invention, a method of moulding, in a plastics material, an article having at least one narrow cross-section elongate bore therein, said method comprising the steps of providing a mould having the shape of the article to be moulded, providing, at the location of the or each narrow cross-section elongate bore, an appropriate narrow elongate core member, which passes through an aperture in the mould, through the appropriate length of the mould cavity and is engaged in an aperture or recess in the far side of the mould from the aperture, or an insert in the mould, closing the mould, injecting the plastics material into the mould, removing the elongate core member or members, opening the mould and ejecting the moulded article.

The narrow elongate core member or members can take the form of a piece or pieces of wire, for example, formed of stainless steel. The wire or other core member is supported at the one end in the aperture in the mould and at the other end in the aperture or recess on the far side of the mould or the insert in the mould. Thus, the elongate core member need not move during the moulding operation.

When one is moulding with a plastics material which tends to shrink when it sets, then the core member can be removed at any time. Other plastics materials, however, preferably have the core member removed before the plastics material has set.

In order that the present invention may more readily be understood, the following description is given, merely by way of example, reference being made to the accompanying drawing, in which the sole Figure is a schematic cross-section through one embodiment of mould arrangement used with the method of the present invention.

The mould illustrated includes a top mould half 10 and a bottom mould half 11 which has two portions or inserts 12 and 13 which project into the mould cavity 14 formed by the moulded parts 10 and 11.

As illustrated, the top mould half 10 is fixed and the bottom mould half is movable vertically by means of a ram indicated schematically at 15 from the closed position illustrated to an open position.

At the location where it is desired to provide two elongate bores, the housing part 10 has two apertures 16, 17 through which are passed two elongate core members 18, 19 respectively, these being in the form of lengths of wire. These lengths of wire extend across the mould cavity 14 and are engaged in recesses 20 and 21 in the insert portions 13, 12.

In carrying out the method of the present invention, the mould is brought to the position illustrated and plastics material is introduced through the inlet passage 22 in the mould part 10 to form a plastics material article having the shape defined by the cavity and with bores defined by the wires 18, 19. Either before, or shortly after the plastics material has set, the wires 18, 19 are withdrawn, thus leaving the bores formed in the article. The mould is opened and the article is ejected.

CLAIMS

1. A method of moulding, in a plastics material, an article having at least one narrow cross-section elongate bore therein, said method comprising the steps of providing a mould having the shape of the article to be moulded, providing, at the location of the or each narrow cross-section elongate bore, an appropriate narrow elongate core member, which passes through an aperture in the mould, through the appropriate length of the mould cavity and is engaged in an aperture or recess in the far side of the mould from the aperture, or an insert in the mould, closing the mould, injecting the plastics material into the mould, removing the elongate core member or members, opening the mould and ejecting the moulded article.

2. A method according to claim 1, wherein the elongate core members are pieces of wire.

3. A method according to claim 1 or 2, wherein the elongate core members are removed before the plastics material has set.

4. A method of moulding an article substantially as hereinbefore described, with reference to and as illustrated in the accompanying drawings.

5. An article moulded by the method of any preceding claim.

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